

Developing Math Vocabulary



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enVisionMATH

enVisionMATH includes the **Language of Math** in every topic, grades K-6. Teachers are given the necessary tools for productive vocabulary instruction that are meaningful to all students.

Children learn mathematics best by using it and being actively involved in the learning process. Understanding the language of math gives students the skills needed to think about, talk about, and understand new math concepts. While learning math, it's important for young children to articulate what they are learning. This helps children learn to recognize and answer questions in order to develop problem-solving skills. Students benefit when vocabulary development is built into lesson content, assessments, and intervention modules that target a wide range of student needs.

Facts about Vocabulary

- A relationship exists between vocabulary and achievement
- Comprehension improves when there is a direct connection between the word and word meaning
- Some vocabulary is specific to the content of a subject and must be taught in context
- Fluent use of vocabulary increases student participation and achievement

Meaningful vocabulary instruction includes preteaching mathematics vocabulary, modeling vocabulary when teaching new concepts, using appropriate labels clearly and consistently, and integrating vocabulary knowledge in assessments.

Knowing a word by sight and sound and knowing its dictionary definition are not the same as knowing how to use the word correctly and understanding it when it is heard or seen in various contexts (*Miller & Gildea, 1987*).

Acquiring "Ownership" of Words

Here is how the process of acquiring word knowledge appears to occur, based on the research of Nagy, Anderson, and Herman (1987).

- When new words are introduced, students store in memory some information about how the word fits into what he is learning.
- This information is reinforced each time he sees or hears the word.
- With each new encounter, the student picks up more information about the word according to how it's used in context.
- The student gradually acquires "ownership" of the word and is able to use it when appropriate. Research has proven that it normally takes about 30 exposures to a new word or concept before it is learned well.

What the National Reading Panel Says About the Role of Vocabulary Instruction

(Reprinted from *National Reading Panel, 2000, p. 4-4*)

1. There is a need for direct instruction of vocabulary items required for a specific text.
2. Repetition and multiple exposure to vocabulary items are important. Students should be given items that will be likely to appear in many contexts.